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## **Retail projects come in all shapes and sizes: Design consideration for retail sites**

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Retail projects come in all shapes and sizes. Whether we are dealing with the small town Main Street storefront, or the regional shopping mall, the items to be understood and addressed usually grow proportionally. We have all heard the phrase: "location, location, location!" Retail needs to be in high traffic volume areas to be successful. We also want the nearby roadways to operate efficiently, so that the potential customers don't hesitate to patronize tenant(s). A professional traffic study will determine current and projected traffic volumes, patterns and the levels of service of the roadways and intersections. This will determine whether pavement widening or turn lanes are required, or ultimately traffic signals. The project may be located in a high traffic corridor already, with all the necessary infrastructure in place. However, if the area is an up and coming retail zone, then some improvements may be required.

Many of the site requirements depend on the specific use. The proposed use drives the required parking and loading zones, creating a balancing exercise between the building size and shape and pavement areas. Add in the locality's open space and landscape requirements and you have to perform some trial and error concepts. For example, restaurants with full seating and a bar require more parking than retail shops. Your project may need a drive-thru window to accommodate a fast food, a drug store or a banking facility. Drive-thrus require stacking and by-pass lanes. All of these various components ultimately determine how the building will be placed on the site, its shape and will determine leasable area. The initial impulse is to provide the minimum required parking so as to maximize the tenant spaces. It is good, however, to understand your tenants' real needs and operations as their actual usage may dictate more parking than the typical requirements. Without adequate parking, business is lost. The type of businesses on your property will also determine the need for loading areas. Most municipalities require them, with the number increasing with the size of the building. If tractor trailer deliveries are necessary, then you must allow space for them to deliver and to be out of the way. However, if your site is less intense or you propose off-hour deliveries, you may be able to obtain a waiver from loading zones. The site turning movements are important to consider and will be a concern of the local fire department in getting emergency vehicles around on the site.

Retail space is valuable. It is no secret that local, state and federal agencies require an array of drainage and erosion control facilities to prevent off-site impacts from both quantity and quality of storm water runoff. This is true for both the construction phase and the completed site. In order to control the increased volumes and rates of run-off due to the addition of impervious areas to a site, grassed storage basins or underground piping and / or chambers are usually necessary. The goals are always to maintain or reduce the run-off to pre-development levels. This is achieved by holding back the storm water (detention) during the storm event and slowly releasing it over time. The

amount of impervious area will determine the size of the storage necessary. Further complicating the situation is the topography of the site. If large enough, the drainage may flow in different directions and each drainage area needs to be checked and compensation provided appropriately. The current trend is to not only detain the water, but rather to retain and recharge the water back into the ground. How to accomplish this will depend on the type of soils on the site, the associated percolation rates and the seasonal ground water levels. Another concern with recharge, in particular for areas that are being re-developed, is flushing existing contaminants from previous development further off-site. An environmental assessment in these cases should be considered so that liability can be avoided or controlled.

Every development project has its own unique challenges that are site specific. As you can see, the zoning and site plan regulations, topography, utilities, roadway access and traffic patterns are just some of the concerns that need to be addressed. Cuoco & Cormier Engineering is celebrating its 30th year of helping clients grow and succeed. Let us help you in the planning and design of your next project, and in navigating the permitting process. Find us at [www.cuocoandcormier.com](http://www.cuocoandcormier.com) or follow us on LinkedIn, Facebook and Twitter.

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